





Exhibit I



U.S. Patent No. 11,176,538


Claim No.	Claim Language	Samsung Pay-enabled computing device
1[Preamble]	A method of performing a payment transaction, the method comprising:	<p>A Samsung Pay-enabled computing device facilitates a method of performing a payment transaction.</p> <h2 style="text-align: center;">Keep your favorite cards in one place.</h2> <p style="text-align: center;">Samsung Pay lets you carry your credit, debit, gift and membership cards on your devices. Just take a photo of your card or a barcode, then tap to check out.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Credit and debit cards (US) Add your qualifying Visa, MasterCard or American Express cards issued by our partner banks. Samsung Pay currently supports 1000+ banks and credit unions, with more on the way.</p> <p>Membership cards Use your camera to add loyalty, membership and gift cards to your phone or wearable. Samsung Pay can store almost any card with a barcode on it.</p> <p>Gift cards You can purchase, send and receive gift cards directly from the app.* Or store your existing gift cards on Samsung Pay to ensure you always have them when you need them.</p> <p>SEE ALL MERCHANTS</p> </div> <div style="width: 50%; text-align: center;">  </div> </div> <p><i>Samsung Pay</i>, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Apr. 20, 2022). <i>See also</i> Lexy Savvides, Samsung Pay: Everything you need to know (FAQ), CNET (July 21, 2021 3:00 a.m. PT), https://www.cnet.com/how-to/samsung-pay-everything-you-need-to-know-faq-mobile-wallet/.</p>
1a	receiving an input at an electronic device corresponding to a priming	A Samsung Pay-enabled computing device is an electronic device that receives an input corresponding to a priming operation of the electronic device by an authorized user.

Claim No.	Claim Language	Samsung Pay-enabled computing device
	operation of the electronic device by an authorized user; and,	<p data-bbox="800 183 1152 212">Make a payment using the app</p> <p data-bbox="800 258 1281 313">With Samsung Pay, you can purchase things without digging through your wallet.</p> <p data-bbox="800 342 1302 516">When you're ready to pay, open Samsung Pay on your phone. Tap Pay, and select your preferred card. Tap PIN or IRIS, and then enter the required security information. Or if you have fingerprint security set up, simply place your finger on your phone's fingerprint scanner.</p> <p data-bbox="800 545 1293 630">Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase.</p> <p data-bbox="506 634 1652 703"><i>Make an in-store payment with Samsung Pay, Samsung, https://www.samsung.com/us/support/answer/ANS00045102/ (last visited Apr. 20, 2022).</i></p>   <p data-bbox="1142 954 1352 976">User authentication</p> <p data-bbox="1031 997 1465 1065">Every transaction is authenticated by your fingerprint, PIN or facial recognition. If your phone is lost or stolen, you can remotely lock or erase your Samsung Pay account with Find My Mobile.*</p> <p data-bbox="506 1081 1745 1114"><i>Samsung Pay, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Apr. 20, 2022).</i></p>

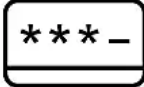
Claim No.	Claim Language	Samsung Pay-enabled computing device
1b	wherein the authorizing of a user of the electronic device comprises recognizing a user input using a human input sensor, and wherein the human input sensor is any one of a touch sensor, a touch-screen display interface, a gesture sensor, a motion sensor, and a biometric sensor; and,	<p>A Samsung Pay-enabled computing device recognizes a user input using a human input sensor, and wherein the human input sensor is any one of a touch sensor, a touch-screen display interface, a gesture sensor, a motion sensor, and a biometric sensor to authorize a user of the electronic device.</p> <p>Make a payment using the app</p> <p>With Samsung Pay, you can purchase things without digging through your wallet.</p> <p>When you're ready to pay, open Samsung Pay on your phone. Tap Pay, and select your preferred card. Tap PIN or IRIS, and then enter the required security information. Or if you have fingerprint security set up, simply place your finger on your phone's fingerprint scanner.</p> <p>Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase.</p> <p><i>Make an in-store payment with Samsung Pay, Samsung, https://www.samsung.com/us/support/answer/ANS00045102/ (last visited Apr. 20, 2022).</i></p>   <p>User authentication</p> <p>Every transaction is authenticated by your fingerprint, PIN or facial recognition. If your phone is lost or stolen, you can remotely lock or erase your Samsung Pay account with Find My Mobile.*</p> <p><i>Samsung Pay, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Apr. 20, 2022).</i></p>
1c	receiving a request for a transaction payment at said electronic device via an	A Samsung Pay-enabled computing device receives a request for a transaction payment at said electronic device via an NFC interface of the device.

Claim No.	Claim Language	Samsung Pay-enabled computing device
	NFC interface of the device; and,	<div data-bbox="1066 168 1436 743" data-label="Image"> </div> <p data-bbox="506 748 1745 781"><i>Samsung Pay</i>, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Apr. 20, 2022).</p> <p data-bbox="804 792 1157 824">Make a payment using the app</p> <p data-bbox="804 867 1283 922">With Samsung Pay, you can purchase things without digging through your wallet.</p> <p data-bbox="804 951 1304 1127">When you're ready to pay, open Samsung Pay on your phone. Tap Pay, and select your preferred card. Tap PIN or IRIS, and then enter the required security information. Or if you have fingerprint security set up, simply place your finger on your phone's fingerprint scanner.</p> <p data-bbox="804 1156 1297 1240">Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase.</p> <div data-bbox="1339 867 1696 1149" data-label="Image"> </div> <p data-bbox="506 1243 1654 1312"><i>Make an in-store payment with Samsung Pay</i>, Samsung, https://www.samsung.com/us/support/answer/ANS00045102/ (last visited Apr. 20, 2022).</p>
1d	displaying, on a display of the device, a transaction payment	A Samsung Pay-enabled computing device displays, on a display of the device, a transaction payment request and at least a portion of an original static issuer-supplied payment account information associated with a payment method, for a user selection in paying the payment request.

Claim No.	Claim Language	Samsung Pay-enabled computing device
	request and at least a portion of an original static issuer-supplied payment account information associated with a payment method, for a user selection in paying the payment request; and,	<p data-bbox="716 180 1199 212">Make a payment using Favorite Cards</p> <p data-bbox="716 266 1755 293">If you have the Favorite Cards feature activated on your phone, you can access your cards even faster.</p> <ol data-bbox="716 347 1293 773" style="list-style-type: none"> <li data-bbox="716 347 1293 440">1. To make a payment with your Favorite Cards, swipe up from the bottom of the screen. Then, swipe through and select your preferred card. <li data-bbox="716 456 1293 553">2. Select your preferred card. Tap Pay, and then choose your desired security option, such as entering your PIN or fingerprints. <li data-bbox="716 570 1293 667">3. Enter the required security information or simply place your finger on your phone's fingerprint scanner. <li data-bbox="716 683 1293 773">4. Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase. <p data-bbox="772 805 1146 837">Make a payment using the app</p> <p data-bbox="772 886 1278 943">With Samsung Pay, you can purchase things without digging through your wallet.</p> <p data-bbox="772 972 1304 1159">When you're ready to pay, open Samsung Pay on your phone. Tap Pay, and select your preferred card. Tap PIN or IRIS, and then enter the required security information. Or if you have fingerprint security set up, simply place your finger on your phone's fingerprint scanner.</p> <p data-bbox="772 1188 1293 1276">Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase.</p> <p data-bbox="506 1284 1650 1349"><i>Make an in-store payment with Samsung Pay, Samsung,</i> https://www.samsung.com/us/support/answer/ANS00045102/ (last visited Apr. 20, 2022).</p> <div data-bbox="1360 347 1776 667">  </div> <div data-bbox="1335 878 1724 1179">  </div>



Claim No.	Claim Language	Samsung Pay-enabled computing device
		 <p>note: You may be asked for the last four digits of your payment card (or your digital account number) when making a payment or processing a return using Samsung Pay. This number is different from the last four digits on your physical card and the card photo.</p> <p><i>Locate Last Four Digits of the Digital Card Number, Samsung, http://api.samsungsimulator.com/app-template/dynamic/simulator/index.jsp?uuid=75181773-8f8a-4fc6-a319-89988dafa123&publishType=preview&authorization=aW5zaWRlcjE6Mjg1YzZiZGVhbnM1NGZjZjlkZWUzMjc3NDI0YzQ3YWI%3D#!topic/basic_functions/locate_last_four_digits_of_the_digital_card_number (last visited Apr. 21, 2022).</i></p>
1e	retrieving from a memory attached to a processor of the device, a device-specific static limited-use payment information,	<p>A Samsung Pay-enabled computing device retrieves from a memory attached to a processor of the device, a device-specific static limited-use payment information, associated with said selected payment method.</p> <p>2. What is a token and how is it generated? A digital token is created to represent consumers' payment credentials. By substituting the real card number with a token, Samsung Pay avoids putting the real card numbers at risk of theft and misuse. Like credit and debit card numbers, the purpose of the digital token is to route transactions to the correct payment network and issuer. Samsung Pay does not store credit or debit card numbers. Instead, Samsung Pay uses tokens for transactions. Tokens are generated by the payment network, and not by the Samsung Pay handset. The card issuers and payment networks set the rules and parameters of the tokenization service, conduct account verification and cardholder authorization during the token request stage (when the token is provisioned), and authorize transactions.</p>


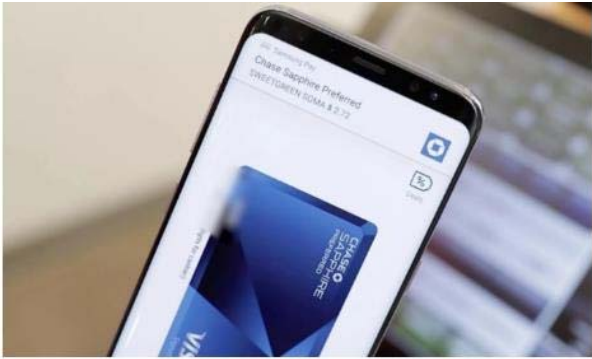
Claim No.	Claim Language	Samsung Pay-enabled computing device
	associated with said selected payment method; and,	FAQs, Samsung (Aug. 7, 2016) <i>available at</i> https://security.samsungmobile.com/doc/Press_Guidance_Samsung_Pay.pdf . <i>See also Mobile payments with digital wallets and tokenization: How Google Pay, Apple Pay and Samsung Pay protect your card details</i> , Advantio (Feb. 22, 2021), https://www.advantio.com/blog/mobile-payments-with-digital-wallets-and-tokenization-how-google-pay-apple-pay-and-samsung-pay-protect-your-card-details ; US Payments Forum, <i>EMV Payment Tokenization Primer and Lessons Learned</i> at 12 (June 2019) <i>available at</i> https://www.uspaymentsforum.org/wp-content/uploads/2019/06/EMV-Payment-Tokenization-Primer-Lessons-Learned-FINAL-June-2019.pdf ; EMVCo, <i>EMV® Payment Tokenisation Specification – Technical Framework v2.1</i> at 35–36 (Jun. 14, 2019) <i>available at</i> https://www.emvco.com/emv-technologies/payment-tokenisation/ .
1f	dynamically generating, by a processor of the device, device-specific limited-use payment information, for said selected payment method; and,	<p>A Samsung Pay-enabled computing device dynamically generates, by a processor of the device, device-specific limited-use payment information, for said selected payment method.</p> <div data-bbox="1171 618 1325 711" data-label="Image"> </div> <p style="text-align: center;">Data security</p> <p style="text-align: center;">Tokenization creates a unique randomized set of numbers to be used at each new transaction, so your real card number is never used from your phone.</p> <p><i>Samsung Pay</i>, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Apr. 20, 2022).</p> <p>3. How is a cryptogram generated? A cryptogram is generated using at least three pieces of information: the digital token, the application transaction counter (ATC), and a secret key. The cryptogram is designed to appear fully random to anyone that does not have the secret key. This works to prevent a cryptogram from being guessed. The secret key is generated by the payment networks and is protected, end to end, between the payment networks and TrustZone on the device. Only one cryptogram can be generated per explicit user authorization. The cryptograms are used to tie an ATC to a digital token and help to prevent modification of the ATC. This in turn helps to prevent transaction information used for one purchase from being reused for multiple purchases.</p> <p>FAQs, Samsung (Aug. 7, 2016) <i>available at</i> https://security.samsungmobile.com/doc/Press_Guidance_Samsung_Pay.pdf. <i>See also Mobile payments with digital wallets and tokenization: How Google Pay, Apple Pay and Samsung Pay protect your card details</i>, Advantio (Feb. 22, 2021), https://www.advantio.com/blog/mobile-payments-with-digital-wallets-and-tokenization-how-google-pay-apple-pay-and-samsung-pay-protect-your-card-details.</p>


Claim No.	Claim Language	Samsung Pay-enabled computing device
		apple-pay-and-samsung-pay-protect-your-card-details; US Payments Forum, <i>EMV Payment Tokenization Primer and Lessons Learned</i> at 12 (June 2019) available at https://www.uspaymentsforum.org/wp-content/uploads/2019/06/EMV-Payment-Tokenization-Primer-Lessons-Learned-FINAL-June-2019.pdf ; EMVCo, <i>EMV® Payment Tokenisation Specification – Technical Framework v2.1</i> at 35–36 (Jun. 14, 2019) available at https://www.emvco.com/emv-technologies/payment-tokenisation/ .
1g	using said limited-use payment information in place of at least a portion of said selected original issuer-supplied payment information for the transaction; and,	<p>A Samsung Pay-enabled computing device uses said limited-use payment information in place of at least a portion of said selected original issuer-supplied payment information for the transaction.</p>  <p style="text-align: center;">Data security</p> <p style="text-align: center;">Tokenization creates a unique randomized set of numbers to be used at each new transaction, so your real card number is never used from your phone.</p> <p><i>Samsung Pay</i>, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Apr. 20, 2022).</p> <p>1. How does Samsung Pay work?</p> <p>Each time Samsung Pay is used for a transaction, the Samsung Pay handset sends at least three pieces of information.</p> <p>The first is a digital token that represents the credit or debit card information. The digital token is a surrogate credit or debit card number. The digital token's primary purpose is to route transactions to the correct payment network and to the correct issuer.</p> <p>The second piece of information is the application transaction counter (ATC). The ATC is a counter that is updated for every transaction. Its purpose is to help ensure that the same transaction information cannot be replayed to make multiple purchases. Payment networks use this number to track the sequence of transactions and determine whether an attempted transaction is older than the last one approved or is otherwise out of sequence. If so, it is an indication that something is amiss, and appropriate action can be taken.</p> <p>The third piece of information is the cryptogram. The cryptogram is an authentication code generated using, at a minimum, a secret key, the digital token and the ATC. Cryptograms serve to validate that the transaction information has not been modified and that it was generated by the expected user's handset.</p> <p>FAQs, Samsung (Aug. 7, 2016) available at https://security.samsungmobile.com/doc/Press_Guidance_Samsung_Pay.pdf.</p>

Claim No.	Claim Language	Samsung Pay-enabled computing device
		<p>2. What is a token and how is it generated? A digital token is created to represent consumers' payment credentials. By substituting the real card number with a token, Samsung Pay avoids putting the real card numbers at risk of theft and misuse. Like credit and debit card numbers, the purpose of the digital token is to route transactions to the correct payment network and issuer. Samsung Pay does not store credit or debit card numbers. Instead, Samsung Pay uses tokens for transactions. Tokens are generated by the payment network, and not by the Samsung Pay handset. The card issuers and payment networks set the rules and parameters of the tokenization service, conduct account verification and cardholder authorization during the token request stage (when the token is provisioned), and authorize transactions.</p> <p><i>Id.</i> See also <i>Mobile payments with digital wallets and tokenization: How Google Pay, Apple Pay and Samsung Pay protect your card details</i>, Advantio (Feb. 22, 2021), https://www.advantio.com/blog/mobile-payments-with-digital-wallets-and-tokenization-how-google-pay-apple-pay-and-samsung-pay-protect-your-card-details; US Payments Forum, <i>EMV Payment Tokenization Primer and Lessons Learned</i> at 12 (June 2019) available at https://www.uspaymentsforum.org/wp-content/uploads/2019/06/EMV-Payment-Tokenization-Primer-Lessons-Learned-FINAL-June-2019.pdf; EMVCo, <i>EMV® Payment Tokenisation Specification – Technical Framework v2.1</i> at 35–36 (Jun. 14, 2019) available at https://www.emvco.com/emv-technologies/payment-tokenisation/.</p>
1h	combining of said dynamically-generated limited-use payment information with said static limited-use payment information, to generate a complete device payment information; and,	<p>1. How does Samsung Pay work? Each time Samsung Pay is used for a transaction, the Samsung Pay handset sends at least three pieces of information.</p> <p>The first is a digital token that represents the credit or debit card information. The digital token is a surrogate credit or debit card number. The digital token's primary purpose is to route transactions to the correct payment network and to the correct issuer.</p> <p>The second piece of information is the application transaction counter (ATC). The ATC is a counter that is updated for every transaction. Its purpose is to help ensure that the same transaction information cannot be replayed to make multiple purchases. Payment networks use this number to track the sequence of transactions and determine whether an attempted transaction is older than the last one approved or is otherwise out of sequence. If so, it is an indication that something is amiss, and appropriate action can be taken.</p> <p>The third piece of information is the cryptogram. The cryptogram is an authentication code generated using, at a minimum, a secret key, the digital token and the ATC. Cryptograms serve to validate that the transaction information has not been modified and that it was generated by the expected user's handset.</p> <p>FAQs, Samsung (Aug. 7, 2016) available at https://security.samsungmobile.com/doc/Press_Guidance_Samsung_Pay.pdf. See also <i>Mobile payments with digital wallets and tokenization: How Google Pay, Apple Pay and Samsung Pay protect your card details</i>, Advantio (Feb. 22, 2021), https://www.advantio.com/blog/mobile-payments-with-digital-wallets-and-tokenization-how-google-pay-apple-pay-and-samsung-pay-protect-your-card-details; US Payments Forum, <i>EMV Payment Tokenization Primer and Lessons Learned</i> at 12 (June 2019) available at https://www.uspaymentsforum.org/wp-</p>

Claim No.	Claim Language	Samsung Pay-enabled computing device
		content/uploads/2019/06/EMV-Payment-Tokenization-Primer-Lessons-Learned-FINAL-June-2019.pdf; EMVCo, <i>EMV® Payment Tokenisation Specification – Technical Framework v2.1</i> at 35–36 (Jun. 14, 2019) available at https://www.emvco.com/emv-technologies/payment-tokenisation/ .
1i	transmitting said complete device payment information from said electronic device to a recipient reader via said NFC interface to the recipient NFC reader for a processing of the payment transaction; and,	<p>A Samsung Pay-enabled computing device transmits said complete device payment information from said electronic device to a recipient reader via said NFC interface to the recipient NFC reader for a processing of the payment transaction.</p>  <p><i>Samsung Pay</i>, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Apr. 20, 2022).</p>

Claim No.	Claim Language	Samsung Pay-enabled computing device
		<p>Make a payment using the app</p> <p>With Samsung Pay, you can purchase things without digging through your wallet.</p> <p>When you're ready to pay, open Samsung Pay on your phone. Tap Pay, and select your preferred card. Tap PIN or IRIS, and then enter the required security information. Or if you have fingerprint security set up, simply place your finger on your phone's fingerprint scanner.</p> <p>Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase.</p>  <p><i>Make an in-store payment with Samsung Pay, Samsung, https://www.samsung.com/us/support/answer/ANS00045102/ (last visited Apr. 20, 2022).</i></p>
1j	receiving information at said electronic device corresponding to a transaction status of the payment transaction, wherein such transaction status is at least partly dependent on validation of the transmitted complete device	<p>A Samsung Pay-enabled computing device receives information at said electronic device corresponding to a transaction status of the payment transaction, wherein such transaction status is at least partly dependent on validation of the transmitted complete device payment information by a payment processor authority and a payment issuer authority.</p>  <p>You'll see a transaction notification pop up at the top of the screen. Lexy Savvides/CNET</p> <p>If you're using a debit card through Samsung Pay, you may still need to enter the card PIN on the terminal. Once the payment is made you'll get a notification that confirms the merchant name and the amount. It's also listed in the Samsung Pay app.</p> <p>Lexy Savvides, <i>Samsung Pay: Everything you need to know (FAQ)</i>, CNET (July 21, 2021 3:00 a.m. PT), https://www.cnet.com/how-to/samsung-pay-everything-you-need-to-know-faq-mobile-wallet/.</p>

Claim No.	Claim Language	Samsung Pay-enabled computing device
	payment information by a payment processor authority and a payment issuer authority; and,	 <p>CNET, <i>Apple Pay vs. Samsung Pay vs. Google Pay: Which is best?</i>, YouTube (Jun. 12, 2018), https://www.youtube.com/watch?v=LkM_Z3o8T4g. See also <i>Mobile payments with digital wallets and tokenization: How Google Pay, Apple Pay and Samsung Pay protect your card details</i>, Advantio (Feb. 22, 2021), https://www.advantio.com/blog/mobile-payments-with-digital-wallets-and-tokenization-how-google-pay-apple-pay-and-samsung-pay-protect-your-card-details; US Payments Forum, <i>EMV Payment Tokenization Primer and Lessons Learned</i> at 12 (June 2019) available at https://www.uspaymentsforum.org/wp-content/uploads/2019/06/EMV-Payment-Tokenization-Primer-Lessons-Learned-FINAL-June-2019.pdf; EMVCo, <i>EMV® Payment Tokenisation Specification – Technical Framework v2.1</i> at 35–36 (Jun. 14, 2019) available at https://www.emvco.com/emv-technologies/payment-tokenisation/.</p>
1k	visually conveying the transaction payment authorization status via a user-interface displayed on said display.	<p>A Samsung Pay-enabled computing device visually conveys the transaction payment authorization status via a user-interface displayed on said display.</p>  <p>You'll see a transaction notification pop up at the top of the screen. Lexy Savides/CNET</p> <p>If you're using a debit card through Samsung Pay, you may still need to enter the card PIN on the terminal. Once the payment is made you'll get a notification that confirms the merchant name and the amount. It's also listed in the Samsung Pay app.</p>

Claim No.	Claim Language	Samsung Pay-enabled computing device
		<p>Lexy Savvides, <i>Samsung Pay: Everything you need to know (FAQ)</i>, CNET (July 21, 2021 3:00 a.m. PT), https://www.cnet.com/how-to/samsung-pay-everything-you-need-to-know-faq-mobile-wallet/.</p>  <p>CNET, <i>Apple Pay vs. Samsung Pay vs. Google Pay: Which is best?</i>, YouTube (Jun. 12, 2018), https://www.youtube.com/watch?v=LkM_Z3o8T4g. See also <i>Mobile payments with digital wallets and tokenization: How Google Pay, Apple Pay and Samsung Pay protect your card details</i>, Advantio (Feb. 22, 2021), https://www.advantio.com/blog/mobile-payments-with-digital-wallets-and-tokenization-how-google-pay-apple-pay-and-samsung-pay-protect-your-card-details; US Payments Forum, <i>EMV Payment Tokenization Primer and Lessons Learned</i> at 12 (June 2019) available at https://www.uspaymentsforum.org/wp-content/uploads/2019/06/EMV-Payment-Tokenization-Primer-Lessons-Learned-FINAL-June-2019.pdf; EMVCo, <i>EMV® Payment Tokenisation Specification – Technical Framework v2.1</i> at 35–36 (Jun. 14, 2019) available at https://www.emvco.com/emv-technologies/payment-tokenisation/.</p>